2.2 Polynomial Identities & Factoring Key

In addition to finding the product you must write the identity used for 1-10. They are not given on this key!

1. $x^2+3x-10$
2. $9x^2-y^2$
3. $9x^2+24xy+16y^2$
4. $u^3+9u^2v+27uv^2+27v^3$
5. $u-v$
6. x^3-8
7. $(8-5y)(8+5y)$
8. $(y+4)^2$
9. $(3y-2)(9y^2+6y+4)$
10. $(x+7)(x+2)$
11. $x=\frac{5\pm\sqrt{53}}{2}$
12. $x=\frac{2\pm i\sqrt{5}}{3}$
13. $x^2+10ix-25$
14. x^2+9
15. $(2x+7i)(2x-7i)$
16. $(x-5+i)(x-5-i)$
17. $3(k-10)(k+2)$
18. $2(6x-k)(3y+4)$
19. $3n^2(2n-1)$
20. $4(5b+9)(b+6)$
21. $(7n-2)(n+9)$
22. $6(u^2-10)(u+3i)(u-3i)$
23. $(r+10)(r-10)$
24. $2(4a+3b)(4a-3b)$
25. $5(7y+5x)^2$
26. $(1+x)(1-x+x^2)$
27. $(1-5x)(1+5x+25x^2)$
28. $(1+4x^2)(1-4x^2+16x^4)$
29. x = 10, x = 9
30. x = 0, x = -2
31. $-2x^2-3x+3$
32. $x^3-5x^2+10x-12$